REQUEST FOR DRAWING CHANGE APPROVAL

In the currently outstanding Official Action in the above-identified application, the Examiner has noted that the Applicants inadvertently utilized the reference numeral "5" to refer to two different elements. In order to correct that inadvertent error, Applicants propose that the reference numeral "5" that appears in Fig. 5 be changed so as to read -- 8 --. Approval of this drawing change as formally requested below and shown in red on the attached photocopy of Fig. 5 of the above-identified application is respectfully requested. Also, a corrected clean copy of the original page of drawing including Fig. 5 is enclosed herewith and designated "Replacement Sheet" in the upper margin as required by the Rules is enclosed herewith.

IN THE DRWAINGS:

In Fig. 5, please change the reference numeral "5" to -- 8 --.

REMARKS

This is in response to the non-final Official Action currently outstanding with regard to the above-identified application.

Claims 1-6 were pending at the time of the issuance of the currently outstanding Official Action. By the foregoing Amendment, Applicant has amended claim 1 and cancelled claim 2, without prejudice. No claims have been added or withdrawn. Accordingly, upon the entry of the foregoing Amendment, claims 1 and 3-6 will constitute the claims under active prosecution in this application.

The claims of the above-identified application as they will stand upon the entry of the foregoing Amendment are set forth above with appropriate status identifiers and indicating the changes made by the Amendment as required by the Rules.

More specifically, in the currently outstanding non-final Official Action, the Examiner has:

1. Acknowledged Applicant's claim for foreign priority under 35 USC §119 (a)-(d) or (f), and confirmed the receipt by the United States Patent and Trademark Office of the required copies of the priority documents.

2. Objected to the formal drawings filed on 3 March 2005 on the basis that they fail to comply with 37 CFR §1.84(p)(4) because the reference character **"5"** has been used to designate both the Evanescent wave and the Photodetector as shown in Figures 1 and 3 on the one hand and 5 on the other hand, respectively. **Applicant has by the foregoing requested approval of a change to Fig. 5 of the drawings as originally filed that would delete the reference numeral "8" from Fig. 5 and substitute the reference numeral -- 5 -- therefor. A copy of the drawing sheet containing Fig. 5 showing the proposed change in red and a replacement sheet for the sheet of drawing containing Fig. 5 are both enclosed herewith as required by the Rules. Entry of the so proposed change to the drawings of this application and withdrawal of the currently outstanding drawing objection in view thereof is respectfully requested in response to this submission.**

3. Rejected claims 1-6 under 35 USC §103(a) as being unpatentable over Naya (US Patent 5,875,032) in view of Ovshinsky et al. (US Patent 2003/0048744 A1).

4. Provided Applicant with a Notice of References cited, Form PTO-892.

5. Acknowledged Applicant's Information Disclosure Statement as filed with this application on 3 March 2005 by providing Applicant with a copy of the Form PTO/SB/08a/b that accompanied that Statement duly signed, dated and initialed by the Examiner in confirmation of the consideration of the art disclosed therein.

Nor further comment regarding items 1-2 and 4-5 above is deemed to be required in these Remarks.

With respect to item 3, Applicant respectfully calls attention to the fact that by the foregoing Amendment Claim 2 has been cancelled, without prejudice, and all of the limitations of cancelled claim 2 in addition to some clarifying wording concerning the metal layer that is fully supported at the first full paragraph of page 6 of the present specification have been incorporated into claim 1. Applicant respectfully notes for the Examiner's information that the application corresponding to this application in Japan was amended in substantially the same manner as herein proposed, and further that the corresponding Japanese application as so amended has been allowed.

Applicant respectfully submits that the same result should be reached in the present application for at least the following reasons.

The Naya reference discloses a light illuminating means (generally indicated at A) including a light source 14 and lenses 22, 23 and 24 whereby a light beam 13 coming from the light source 14 is shaped and directed so as to travel from the source 14 and to enter the prism 10 at various angles for ultimate reflection from the metallic film 12 mounted on the upper surface of a sample 11. Further, light receiving means having two parts (indicated at 16 and 17 respectively) are provided.

In the Naya reference, the light beam is reflected from the metal film 12 and captured by the parts of the receiving means 16 and 17 and the various parts of the received light beam are compared with one another such that the angle of plasmon creation by the light passing through the metal film 12 and the surface 10a of the sample 11 can be more easily located than would be the case with a single moving receiver.

Further, as the Examiner has correctly concluded, the Naya reference fails to disclose a transparent substrate having at least one ridge formed in a striped manner or light being polarized once in a plane normal to a top surface of the at least one striped ridge. Furthermore, Applicant respectfully submits that the Naya reference also fails to disclose a metal layer disposed on the sides of such an at least one ridge (or indeed on the sides of the metal film 12 alone) and the region neighboring the ridge on the side of the transparent substrate facing the sample. In addition, Applicant respectfully submits that the Naya reference does not disclose the presence of a thin metal film at the top of the metal layer coated ridge. In other words, Naya does not teach, disclose or suggest that a thin metal film should be located on the top of a ridge of a transparent substrate facing the sample for any purpose, nor that a metal film so located should be surrounded by a metal layer (presumably meaning a layer thicker than the metal film that will not easily participate in plasmon formation) that acts to gradually narrow the light "advancing in a depth direction of the ridge" as now claimed.

The Examiner asserts, however, that the Ovshinsky reference discloses a transparent substrate having at least one ridge formed in a striped manner that is coated with a metal film.

Applicant respectfully submits, however, that the Ovshinsky reference does not teach, disclose or suggest that a metal layer should be disposed on the sides of each of the at least one ridge disclosed therein, nor does the Ovshinsky reference teach, disclose or suggest that the metal layer should coat the regions neighboring the ridge while a thin metal layer (i.e., a film) is located at the top of each of the at least one ridge so as to achieve optimal, localized evanescent coupling. In other words, Applicant respectfully submits that the Ovshinsky reference is concerned with a lens that strengthens the light-plasmon coupling beyond that achieveable with a grating.

More specifically, according to Ovshinsky at Paragraph [0066], the structure therein disclosed creates a surface that combines grating and evanescent coupling concepts such that the light-plasmon interaction strength can be elevated to a level enabling PC optical recording. Further, at paragraph [0077], Ovshinsky states that the surface features of his device are "very important" in creating his desired light-plasmon coupling. In particular, Ovshinsky advocates that the surface of the transparent substrate facing the sample should be formed of **concentric** (not striped) surface features that vary regularly in height and preferably form a sinusoidal pattern or a combination of multiple sinusoidal patterns that form a Fourier series (see Ovshinsky at paragraphs 0075 and 0076). Applicant respectfully submits that this is neither a disclosure, nor a suggestion, of a ridge having a top surface to which the incoming light can be polarized in a particular plane as contemplated by the present invention as now specifically claimed. Also, as far as Applicant can tell from the Ovshunsky reference, each of the groups of sinusoidal ridges are ***totally covered by a so-called "conformal" metal film of substantially constant thickness***, and the groups are separated from one another by gaps 102 (see Figs. 8A and 8B). No metallic layer is provided that would act in the manner herein claimed.

Thus, Ovshinsky indicates at paragraph 20 that:

> The present invention also includes a light-plasmon coupling lens including an optically transparent substrate having a light incident surface and a light-plasmon coupling surface opposite the light incident surface. The light-plasmon coupling surface including ***at least a set of circular peaks/valleys*** which form a Fourier sinusoidal pattern in the radial direction of the circular concentric peaks/valleys. **A conformal layer of metal is deposited on the light-plasmon coupling surface of the substrate** and has an aperture *(presumably apertures 102)* at the center thereof through which plasmons are transmitted. (Emphasis added)

In view of the foregoing, Applicant respectfully submits that one of ordinary skill in the art at the time that the present invention was made would not have been lead from the content of the disclosures of the cited and applied references to combine their teachings in a manner that would result in the present invention as hereinabove amended. The Naya reference is simply attempting to facilitate the location of the angle at which plasmons are formed. The Ovshinsky reference, on the other hand, is creating a complex light-plasmon coupling surface that combines grating and evanescent coupling concepts so as to enhance the strength of the coupling provided by either method alone. Neither reference appears to be concerned with minimizing the area of plasmon formation.

In other words, the present invention is not attempting to find the angle of incident light at which plasmons will be generated as in Naya – that is previously determined in the present invention by the geometry of the transparent substrate at each ridge location in combination with the metallic layer. Similarly, the present invention limits the areas of plasmon effect to only portions of the top faces of each ridge – a concept foreign to Naya.

The Ovshinsky reference, on the other hand, is concerned with enhancing the light-plasmon interaction strength to the extent that it is useful in PC optical recording. To do this, that reference discloses the concept of combining grating and evanescent coupling concepts. Therefore, it is true that the Ovshinsky reference teaches evanescent coupling concepts, but it is not true that Ovshinsky teaches those concepts in a manner that would lead one skilled in the art to utilize ridges whose sides are lined with a metallic layer and whose outer faces are lined with a thin metallic film as a way of concentrating the evanescent light-plasmon coupling into an extremely small area on the top faces of the ridges.

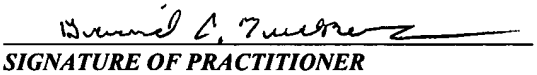
Therefore, Applicant respectfully submits that since the combination of references suggested by the Examiner does not within its four corners suggest the combination now being claimed, and in fact it is necessary to pick and choose among the elements variously claimed in an attempt to reach the present invention – an exercise that still leaves the combination without the metal layer claimed (i.e., showing only the metal film coating the entire ridge) – the Examiner's currently outstanding substantive rejections must fail with respect to the claims as hereinabove amended. All of the claimed elements are not contained in the cited combination of art, nor is the combination of the elements that are shown such as to lead one of ordinary skill in the art to the presently claimed invention.

For each and all of the foregoing reasons, Applicant respectfully submits that as hereinabove amended the claims of the above-identified application are now in condition for allowance. Therefore, reconsideration and allowance of this application as hereinabove amended in response to this submission is respectfully requested.

Applicant believes that additional fees are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. **04-1105**, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

Date: December 27, 2006



SIGNATURE OF PRACTITIONER

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FIG.5

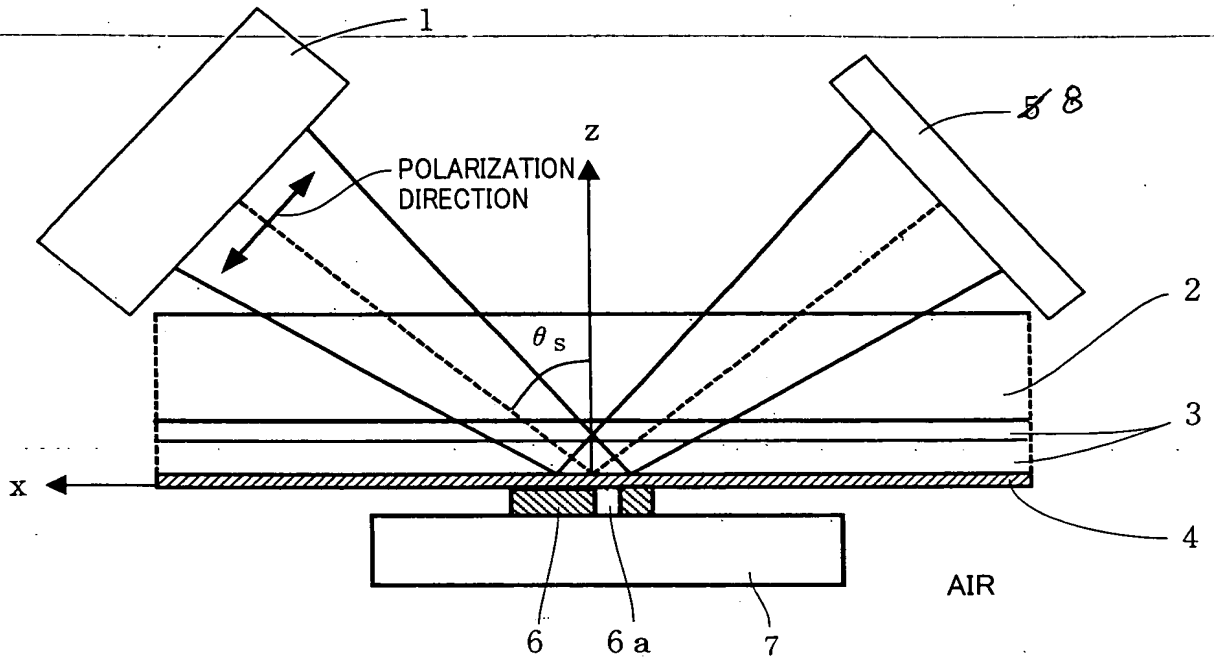

FIG.6 PRIOR ART